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# Type II Diabetes and Dietary Preferences in a Rapidly Urbanizing Region of West Africa

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<http://makola.com>

- Type II diabetes rising exponentially
- Sub-Saharan Africa (SSA): Dual burden of disease
- Undiagnosed cases in SSA estimated to be 75 million
- Urbanization → Nutrition Transition
- WHO: Food consumption, diets and trends info needed

# Background



<http://www.ghc-ca.com>

# Setting



- Diabetes prevalence doubling to 1 million by 2030
- Kumasi, urbanizing more quickly than the capital
- Diabetes recently listed as “top 10 cause of death”
- Higher than average prevalence in W Africa
- Elevated rates of fasting blood sugar
- Previous studies: social knowledge; homemakers and nutritional knowledge

# Setting

(Shaw, Sicree, et al, 2010; Potts, 2009; Amidu, Owiredun, et al, 2012; Ghana Health Service, 2005; Cook-Huynh, et al, 2012; Aikins, 2003; Nti, et al, 2011)

- Komfo Anokye Teaching Hospital
  - Dietician consultations
  - Diet Plans
  - Health Talks in Clinic Waiting Area
- New Guidelines from Ghana National Disease Management and Research Centre & World Diabetes Foundation, Sept 2013
  - Surveillance system to monitor 'unhealthy eating'

# Setting



- To identify themes in food preferences, knowledge, attitudes and behaviors (KABs), rural and urban
- To inform health interventions targeting better self-management of type II diabetes in a rapidly urbanizing area
- To inform social marketing strategies by providing insight into consumption patterns

# Aims





- Interpreter/Research Assistant
- Qualitative
  - Focus groups – Type II diabetes patients, hospital-based, unique identifiers
  - Semi-structured individual interviews –Support persons, population-based
- Demographic survey, keyed to unique identifier
- Appreciation - phone charge, avocados, apples, cash in some cases. Not discussed ahead
- Observation, further discussion and document review

# Methodology





- Minimal risks, unique identifiers
- Interpreter reviewed consent form, signed with thumbprints
- Approved by TJU IRB and Ghana Technology Committee on Human Research Publications and Ethics

# Ethical Issues

- Themes: identified and independently coded using Nvivo
- Inter-rated reliability: themes cross checked by qualitative researcher
- Congruency: reviewed and agreed upon, outside review

# Data Analysis

# Results

## Characteristics of Sample

	Person with Diabetes	Support Person
<b>Gender</b>		
M	10	0
F	20	10
<b>Residence</b>		
Urban	19	5
Rural	11	5
<b>Age Group</b>		
18-29	2	0
30-39	2	3
40-49	9	1
50-59	11	4
60-69	4	2
70-74	2	0
<b>Years Since Diagnosis</b>		
0.5-4	9	N/A
5-9	10	1
10-14	4	N/A
15-19	5	N/A
20-24	2	N/A
<b>Religion</b>		
Animist	1	0
Catholic	3	1
Christian	20	8
Muslim	6	1

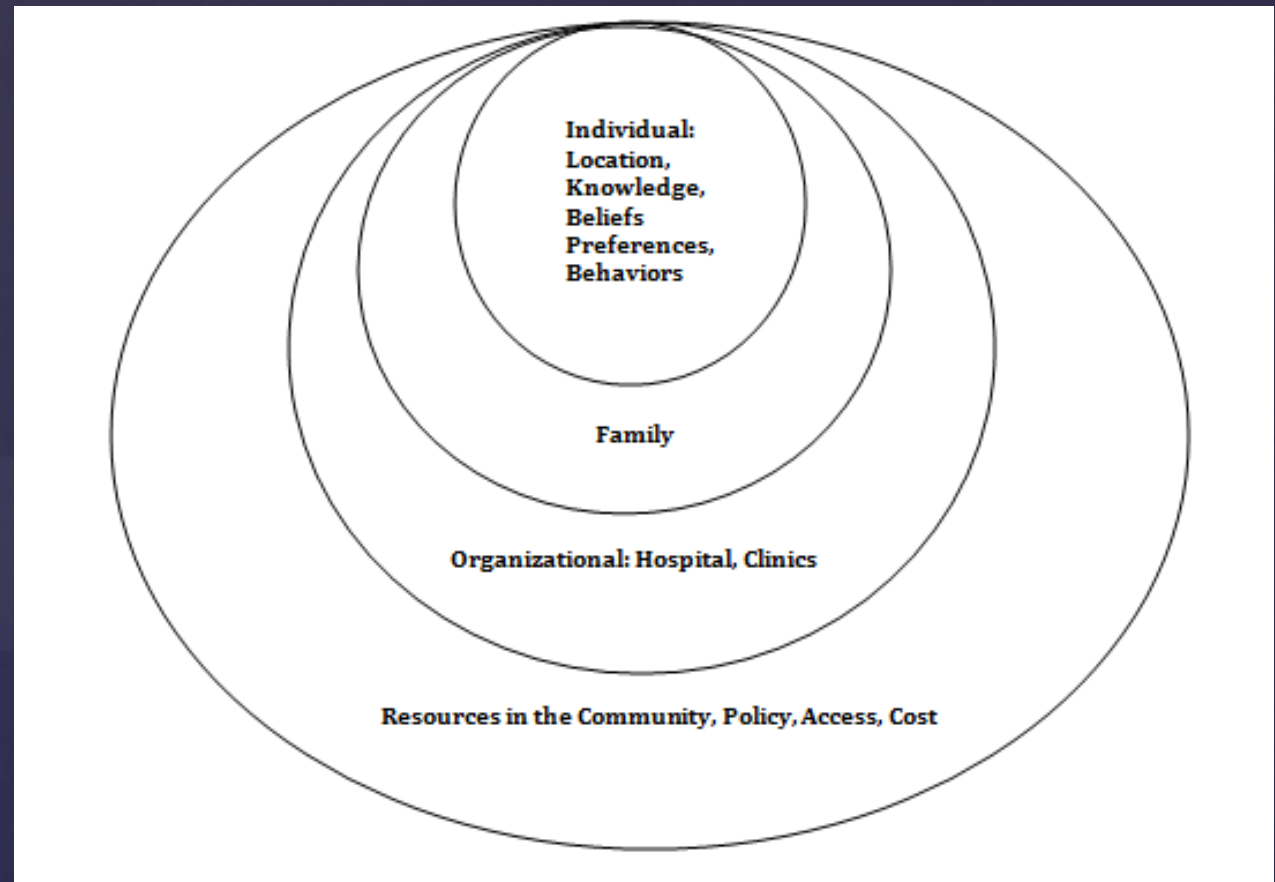


## Characteristics of Sample

	Person with Diabetes	Support Person
<b>Ethnicity</b>		
Akan	24	8
Dagomba	4	1
Grushi	0	1
Mossi	1	0
Sisala	1	0
<b>Highest Level of Education Attained</b>		
No Formal	3	3
Primary	4	0
Junior High School	18	4
High School	2	0
Technical School	1	0
Commercial School	0	0
Bachelor's Degree	1	2
Master's Degree	0	1

# Results

# A Priori Themes based on Ecological Model:



# Results

# Knowledge About Nutrition

- Added Sugar and Sweet -Tasting Foods
  - Avoid: adding sugar to porridge, tea, sugar-sweetened beverages, sweet processed foods, “sweet bread”
  - Fruit generally ok
- Artificial Sweeteners
  - Used sparingly

## Results: Themes





# Knowledge About Nutrition

- Fats, Salt, Maggi
- Portion Size

“The intake is very difficult because of quantity, I have stomach aches from it because I don’t get satisfied” (52 year old urban female)

## Results: Themes

# Knowledge About Nutrition

## Plantains

*Previously we were told to eat a lot of plantain and not the other starchy foods so the older generation held on strongly to these views but these days we are told that we can eat almost everything, but rather add a lot of soup or stew....I too attended a private clinic some time ago, the Dr. did not tell me not to eat plantain but I heard it from other patients... I am part of a women's group. Some people come and tell us that plantain is good for diabetics. I don't say anything but then I tell the other diabetic patients later that it's not true. (59 year old rural female)*

## Results: Themes

## Dietary Preferences

- Home Cooked Meals – highly preferred

“There is nothing better than a home cooked meal. When it takes a long time, we eat something small to sustain us until it’s ready. Time is not a factor because we prefer to cook and eat homemade” (All in Focus Group)

## Results: Themes



# Dietary Preferences

## Generational Differences

*“Older people eat differently. Young people prefer sweet things. Also, younger people prefer lots of meat. They can sit at a beer bar and order lots of meat and before you know it, they have a pot belly. Young people don’t really have worries. They live their lives however they want.” (60 year old urban female)*

## Results: Themes

# Dietary Preferences

## Bread, Biscuits and Crackers

*“Without sugar”*

*“Healthy”*

*“Just made of flour”*

*“My husband doesn’t take soft drinks but he has biscuits without sugar if there is no bread” (56 year old urban female).*



## Results: Themes

# Dietary Beliefs

- Local Foods Vs. Processed Foods

*“Local foods are healthier than packaged because of the sugar content. If you want to live long, avoid packaged foods” (46 year old urban male)*

*“Local food is good and healthy. Packaged food is not healthy because of the ingredients....what’s on the label may not be true” (55 year old rural female)*

*“You can’t compare them because the imported has chemicals. But the one we have, that one, when you prepare it and you prepare it well, that one is excellent” (62 year old urban female).*

## Results: Themes





# Dietary Behavior

## Importance of Timing for Meals and Medication

*“Timing is most important. I used to eat at any time. I don’t do that anymore, now I specifically eat between 7-8:00am and between 11:00am - 2:30pm. When I get hungry, though, I have to eat immediately because I shake.” (42 year old urban female)*

## Results: Themes

## Barriers & Enabling Factors

### Impact on Family

*“If we had the means, we would but it’s too costly. You have to do it for your whole family, not just yourself.”* (All in Focus Group)

## Results: Themes

## Barriers & Enabling Factors

### Availability of Fresh Produce

*“We should cultivate the habit of eating our local vegetables which are equally healthy and not necessarily patronize the exotic if they are too costly.” (57 year old urban male)*

## Results: Themes

## Information Channels

Healthcare Providers and Other

*“I don’t go strictly by what the dietician says but I don’t overeat. Even though we are advised to eat certain amounts of food, the drugs are very strong and the quantity of food is too small for that, so I take enough for the medication.” (46 year old urban male)*

## Results: Themes



## Understood and Followed

- Added Sugar, Sweet-Tasting Foods, Fat, Salt, Maggi, Timing
- Fruit - link not as clear
- Increase awareness of fruit's affect on diabetes

## Confusion, Uncertainty

- Food Portioning – abstract, arbitrary, insufficient
- More time spend on understanding portion size
  - Increasing ratio of vegetable to starch
- Targeted campaign to increase local vegetable consumption
  - Plantains
- Refer to new evidence and address recommendations with consistent messaging
  - Processed Foods – Bread, Biscuits, Crackers
- Nutritional recommendations should directly address these items with consistency
- A list of alternatives to higher glycemic foods could be developed

# Discussion & Recommendations



<http://forum.goregrish.com>

## Younger generations

- Prefers processed, highly seasoned, sweetened foods in a globalizing food landscape
- Research to understand KABs among youth and young adults in Ghana
- Develop informed prevention campaign targeting dietary preferences among youth

# Discussion & Recommendations

### Aim 1

- To identify themes in food preferences, knowledge, attitudes and behaviors (KABs), rural and urban

### Aim 2

- To inform health interventions targeting better self- management of type II diabetes in a rapidly urbanizing area
  - Recommend AADE 7 Self-Care Behaviors

### Aim 3

- To inform social marketing strategies by providing insight into consumption patterns

# Conclusions





<http://ghanabetterbusinessbureau.blogspot.com>





“Learning from the past to create a better future”

Medase/Thank you!

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